



UNITED STATES PATENT AND TRADEMARK OFFICE

Can

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/719,021

11/24/2003

Joon-ho Cha

1793.1110

9169

21171 7590 09/26/2007
STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

VAN ROY, TOD THOMAS

ART UNIT

PAPER NUMBER

2828

MAIL DATE

DELIVERY MODE

09/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/719,021

Applicant(s)

CHA ET AL.

Examiner

Tod T. Van Roy

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6,7,9,10,18-21 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-7,9-10,18-21,32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/6/07
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

The examiner acknowledges the addition of claims 1, 3, and 4.

Response to Arguments

Applicant's arguments filed 07/10/2007 have been fully considered but they are not persuasive.

The Applicant has argued that Spangler does not teach the ground connectors to be longer than the active connector, but to only engage before the active connectors.

The Examiner does not agree. Spangler at col.1 lines 59-62 teaches the ground connectors to be longer than the active connectors to accomplish the earlier engaging action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 6-7, 9-10, 18-21 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant admitted prior art (AAPA, specification, figures) in view of Spangler (US 5547385) and further in view of Patrick, Jr. (US 3767971).

With respect to claim 6, AAPA teaches a laser diode (fig. 5 #10) comprising at least one active connector (fig. 5 #11), a ground connector (fig. 5 #13), wherein the active connector and ground connector protrude from the laser diode so as to be electrically connectable to a laser diode driving integrated circuit, and AAPA further teaches the insertion of the leads into a printed circuit board (PCB) ([0005]). AAPA does not teach the ground pin to be longer than the active pin or to be acutely shaped compared to the active connector. Spangler teaches an electrical connector in which the ground pin is longer than the active pins (col. 1 lines 56-64). Patrick teaches an acutely shaped conductor which is used to facilitate ESD discharges (col. 3 lines 10-15). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the laser diode connectors of AAPA with the ground connector length of Spangler in order to prevent electrostatic discharges (ESDs) from harming the various circuit elements (Spangler, col. 1 lines 45-50), as well as to combine the laser diode ground connector of Riazat and Spangler, used for ESD protection, with the acute shape taught by Patrick in order to further attract the ESDs to the ground connector to protect the various circuit elements.

With respect to claim 7, AAPA, Spangler, Patrick, Jr. teach the laser diode and circuit board connection, and AAPA additionally teaches the use of solder for connecting the pins to the board (fig. 5 #60).

Art Unit: 2828

With respect to claims 9 and 10, AAPA, Patrick, Jr., and Spangler teach the laser diode as outlined in the rejection to claim 15, and AAPA further teaches the active connector to comprise a first connector (fig.5 #11, laser diode) and second connector (fig.5 #12, photodiode).

With respect to claim 18, AAPA, and Spangler and Patrick Jr. teach the laser diode as outline in the rejection to claim 6, but do not teach the ground connector to be acutely shaped as compared to the active connector. Patrick teaches an acutely shaped conductor which is used to facilitate ESD discharges (col.3 lines 10-15). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the laser diode connectors of AAPA, and Spangler with the acute shape taught by Patrick in order to further attract the ESDs to the ground connector to protect the various circuit elements.

With respect to claim 19, AAPA, Spangler, and Patrick teach the laser diode and circuit board connection of claim 18, and AAPA additionally teaches the use of solder for connecting the pins to the board (fig.5 #60).

With respect to claims 20 and 21, AAPA, Patrick and Spangler teach the laser diode as outlined in the rejection to claim 15, and AAPA further teaches the active connector to comprise a first connector (fig.5 #11, laser diode) and second connector (fig.5 #12, photodiode).

With respect to claim 32, AAPA further teaches the ground connector (fig.5 #13) is positioned between the first connector (fig.5 #11) and the second connector (fig.5 #12).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tod T. Van Roy whose telephone number is (571)272-8447. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on (571)272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2828

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TVR

